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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/008,405 | 12/06/2001 | Richard S. Hendricks | A148 1470 | 2952 |
| 7590 | 04/20/2005 | | EXAMINER | |
| Womble Carlyle Sandridge & Rice, PLLC P.O. Box 7037 Atlanta, GA 30357-0037 | | | TANG, SON M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2632 | |

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/008,405 | HENDRICKS ET AL.  |
| | Examiner Son M Tang | Art Unit 2632 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 December 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 and 16-30 is/are rejected.
- 7) Claim(s) 15 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitations of the claim are redundancy of a parent claim 10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 9-11, 13, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orfield [US 64,319,088] in view of Allen et al. [US 6,487,296].**

Regarding to claims 9 -10: Orfield discloses a system for producing selected sounds in a space comprising:

a plurality transducers (speakers) [26], configured and positioned to direct sound into the space upon activation by an amplified audio signal, an electronics module [19] including sound generator [20], amplifier [22] associated with each of said audio transducers for generating audio signals, amplifying the audio signals, and driving the corresponding audio transducer, a system

controller in [14] in each of said electronics modules [19] for receiving control signals [25] from a remote location to each of said transducers independently of the others of said transducers [cited in col. 2, lines 45-52] and controlling the generation of audio signals by said sound generator according to said control signals [as cited in Fig. 1-3, col. 3, lines 24-43].

Orfield does not specify that the control signal is transmitting from a remoter controller for control the production of sound. It is clear that, sound system would not operate without any command control signal from locally/remote~~s~~ location.

It is known in the art that, Allen et al. teach a sound control system comprises a wireless remote control unit [13] which is transmitting control signal to the transducers (speakers), for control the production of sound by each of the speaker independently [as cited in Fig. 1-6, col. 3, lines 24-38]. Therefore, it would have been obvious of one having ordinary skill in the art at the time the invention was made, to implement the remote controller as taught by Allen et al. into the system of Orfield, for the benefit of convenience and better controlling at one location.

Regarding to claim 11: Orfield and Allen et al. disclose all the limitation as described above, further teaches that unit 14 received paging source 25 [as cited in col. 3, lines 30-32 and 41-42].

Regarding to claim 13: Orfield further discloses that the speakers units are mountable in a suspended ceiling grid [as shown in Fig. 3-4, col. 5, lines 29-45].

Regarding to claim 16: Orfield and Allen et al. disclose all the limitation as described above, Orfield further discloses an audio effects unit [24] for adjusting the quality of sound [as cited in Fig. 1].

Regarding to claim 18: Allen et al. and Orfield disclose all the limitation as described above, Allen et al. further teach an audio pre-amplifier (met by signal level conditioning 105) for adjusting the volume level of control signals received [as cited in Fig. 6, col. 8, lines 10-17].

5. **Claims 1-8, 12, 17 and 19-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Orfield [US 64,319,088] in view of Allen et al. [US 6,487,296], and further in view of Lamm et al. [US 6,164,408].

Regarding to claims 1-2, 19-20 and 28: Orfield discloses a system for producing selected sounds in a space comprising:

a plurality transducers (speakers) [26], configured and positioned to direct sound into the space upon activation by an amplified audio signal, an electronics module [19] including sound generator [20], amplifier [22] associated with each of said audio transducers for generating audio signals, amplifying the audio signals, and driving the corresponding audio transducer, a system controller in [14] in each of said electronics modules [19] for receiving control signals [25] from a remote location to each of said transducers independently of the others of said transducers [cited in col. 2, lines 45-52] and controlling the generation of audio signals by said sound generator according to said control signals [as cited in Fig. 1-3, col. 3, lines 24-43].

Orfield does not specify that the control signal is transmitting from a remoter controller for control the production of sound. It is clear that, sound system would not operate without any command control signal from locally/remoter location.

It is known in the art that, Allen et al. teach a sound control system comprises a wireless remote control unit [13] which is transmitting control signal to the transducers (speakers), for control the production of sound by each of the speaker independently [as cited in Fig. 1-6, col. 3, lines 24-38]. Therefore, it would have been obvious of one having ordinary skill in the art at the time the invention was made, to implement the remote controller as taught by Allen et al. into the system of Orfield, for the benefit of convenience and less installation labor.

Orfield and Allen et al. does not specify a flat panel transducer. It is known in the art that, flat panel transducer is one of a of speaker's type, Lamm et al. teach a loudspeaker system comprises a flat panel transducer [10] as shown in Fig. 3-4. It would have been obvious of one having ordinary skill in the art at the time the invention was made to employ flat panel speaker as taught by Lamm et al. in the combination above, for the benefit that, flat panel speaker is light weight, fire proof, efficient, and substantially omni-directional noise masking loudspeaker.

Regarding to claims 3-4 and 16: Orfield further discloses an equalizer [22], which configured to carry out the function that creates the sound effects [see Fig. 1].

Regarding to claims 5 and 17: Orfield, Allen et al. and Lamm et al. disclose all the limitation as described above, Allen et al. further teach an audio enhancer [105] for improving the (output) response of the speaker [see Fig. 6, col. 8, lines 10-26].

Regarding to claim 6: Orfield, Allen et al. and Lamm et al disclose all the limitation as described above, they fail to specify that wherein said remote control unit includes a radio frequency transmitter. Since, radio frequency is known as a common method in wireless communication, therefore, it would have been obvious of one having ordinary skill in the art to

recognize that, to implement a known wireless communication method such as radio frequency in the system described above, for the benefit of longer-range communication.

Regarding to claim 7: Orfield, Allen et al. and Lamm et al. disclose all the limitation as described above, Orfield further disclose that an array of transducers [14] mounted in the suspended ceiling [see Fig. 1-5].

Regarding to claim 8: Orfield further teaches that unit 14 received sound source 25, from paging source [as cited in col. 3, lines 30-32 and 41-42].

Regarding to claim 12: Refer to claim 1 above.

Regarding to claims 21-24: Orfield further discloses a 10 octave equalizer [24], for adjusting and trimming the output of masking sound, and each octave can be preset by adjust the potentiometers [42-48] [as cited in Fig. 1, and col. 3, lines 45-55, col. 6, lines 10-21]. Orfield does not specify that octave filter for shaping the level of said masking sound signals, as long as, octave equalizer is adjusting output frequency, it would be obvious that octave filter is included in an equalizer for trimming output frequency.

Orfield does not specific disclose octave filter is a 4db per octave filter, it is clear that, the octave filter carry out the same function as claimed, and which contained an optimum masking sound. It would obvious of one having ordinary skill in the art to employ a specific dB desired, such as 4 dB for enhancing the masking sound.

Regarding to claims 25 and 29: Refer to claim 6 above.

Regarding to claims 26-27: Orfield further teaches paging and background music signals [as cited in col. 6, lines 7-9].

Regarding to claim 30: Refer to claim 26-27 above.

Allowable Subject Matter

6. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The sound generator includes the library of stored sounds.

Response to Arguments

7. Applicant's arguments filed 12/06/04 have been fully considered but they are not persuasive.

Applicant argued:

1. Orfield or Allen et al. suggested a “system controller” in the electronics module of the speaker unit.
2. the system controller houses a microprocessor that is appropriately programmed ...signals received.
3. As claim 11, Orfield nor Allen suggest a wireless interface between the paging transmitter and the system controller receives “wireless paging message”.

Examiner responds:

1. As shown in Fig. 1 of Orfield element 14 includes control functions in which multiple signals inputs from 20, 25 and 27 are utilized by different elements in a controlled manner to produce output signals in master and slave speakers 26, 62 (see Fig. 1-2 and corresponding disclosure). Therefore, the claimed “system controller” is met or suggested and all controller's components are integrated inside the electronic module of Fig. 5-6. Additionally, col. 2, lines 16-19 clearly indicated that a controller is resident in the device 14.

Further more, the combination of Orfield with the wireless remote control of Allen et al. also requires a controller to orchestrate the various inputs and output operations.

2. Applicant's argued limitations disclosed in the specification but not claimed, the limitations such as microprocessor, programmed or demodulated are not relevant to the rejection.
3. As shown in the rejection, Orfield's 25 or 27 can be used as paging source [col. 3, lines 30-32 and 41-42], wireless paging is well known in the art, therefore it obvious for Orfield's paging input to either wired or wireless.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M Tang whose telephone number is (571)272-2962. The examiner can normally be reached on 4/9 First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (571)272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Son Tang

Daniel Wu
DANIEL WU
SUPERVISORY PATENT EXAMINER
4/18/05